relatively high. The surgery rate and percent with surgery each present a different type of information.

There is wide variation among counties in the discharge rates for surgery. The number of discharges with surgery per 1000 Medicare enrollees ranges from 83 in Clay County to 224 in Avery County. The rate for Medicaid eligibles ranges from 26 in Dare County to 87 in Columbus County. Again, differences among counties in the level of health problems requiring surgery will contribute to this observed variation, but it is difficult not to conclude that in some areas the surgery rate could be reduced without adverse health consequences. This is also apparent when the specific types of surgery are examined in Table 8.

Because of possible problems with the data that are discussed below, these county rates in Tables 6 through 9 should not result in a final judgement about hospital use by the residents of a county. Rather, unusual rates invite further investigation into what may prove to be a problem area.

Discussion

These data reveal some interesting patterns of inpatient hospital utilization in North Carolina. Several cautions are in order, however, particularly for the county-level data. This information was collected entirely from secondary data sources over which we have no direct means of quality control. Each system has some editing procedures, but they vary among CPHA, HCFA, and the hospitals with computer systems. Even within the PAS system there are nearly a hundred hospitals locally coding the medical records information and there is no guarantee of consistency across hospitals. A few hospitals with peculiar coding procedures would not greatly affect the statewide data, but could greatly skew the information for a few counties. Every effort has been made to watch for problems of this sort, but as was stated above, a very high or low rate for a county should be the starting point for further inquiry and not the final word. These rates may better indicate the relative ranking of counties rather than absolute levels of utilization, since they most likely involve some degree of error.

It should be remembered that these data represent only people who are admitted as hospital inpatients, and differences among counties in hospital use do not necessarily mean the same differences in morbidity in the general population (9). Also, a high discharge rate could be due to many readmissions by relatively few patients. These rates have not been adjusted for age, race, or sex and thus differences among counties may be due in part or whole to these demographic factors. But the fact that a county's high hospital discharge rate for diabetes, for example, can be attributed to a large nonwhite population in the area does not reduce the magnitude of the problem in human terms or in terms of the quantity of medical care needed. A high level of disease cannot be ameliorated by statistical standardization.

On the positive side, this data base provides a comprehensive set of very detailed information about general hospital utilization by North Carolina residents, and its uses are not nearly limited to what has been presented in this publication. The full file from which the Medicare/Medicaid tables were drawn is the only available source of diagnosis-specific hospital data for all North Carolina hospital inpatients. Blue Cross and Blue Shield of North Carolina has compiled their paid claims records for Blue Cross subscribers and Medicare patients into a research form, and has distributed diagnosis- and surgery-specific information for these payment sources. Readers may notice some substantial